

## Impact of bounding attachments on breastfeeding success in primipara postpartum mothers

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### ABSTRACT

Breastfeeding is more than just generating healthy breast milk. It is a cooperative activity involving both parties. This study examined how ligation ties affect primiparous women's ability to nurse their babies after giving birth. This type of research is cross-sectional. The study sample consisted of 144 primiparous postpartum women whose children were aged between 0 and three months. The entire sample employed in this study consisted of 106 primiparous postpartum women, selected by a combination of simple random sampling and probability. Questionnaires were used to collect data on attachment factors and breastfeeding success. A correlation value of  $r=0.437$  was obtained, indicating a very positive association between the two variables, and the results demonstrated a significance level of  $\leq 0.05$ . This correlation implies that effective nursing is mostly dependent on the mother and infant developing strong emotional attachment. These results further emphasize the importance of providing primiparous postpartum mothers with sufficient assistance and direction to enhance their bonding and breastfeeding experiences. Teaching caregivers and medical professionals the value of emotional connection and how it affects nursing outcomes are also essential. Given the established link between effective nursing and emotional attachment, healthcare providers can provide customized interventions and support to improve mother-child bonds throughout the postpartum phase.

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### 1. INTRODUCTION

The period between conception and delivery can be challenging for the mothers. Numerous changes can lead to disturbances in both the body and mind. These adjustments may lead to postpartum depression or unhappiness after birth. One week after giving birth, 50% of postpartum moms suffer from the transient state of increased emotional reactivity known as the "postpartum blues." Irritability, emotional instability, and mood fluctuations are the common symptoms of postpartum depression. Hormone changes and acclimation to the new role of motherhood are thought to be the cause of these symptoms. However, it is crucial to remember that postpartum depression typically disappears within a few weeks without the need for special care [1], [2].

The greatest diet for babies is their mother's milk, especially if they are under six months old. Breast milk provides the most complete nutrients available for newborns to grow and develop to their full potential,

breast milk provides the most complete nutrients available [3], [4]. A mother's lack of attachment to her infant might result in emotional and mental illnesses that subsequently affect the child's development. Working mothers who feed their children formula milk or other foods before the infant is six months old contribute to a lack of bonding between mothers and children [5]. According to data from the world health organization (WHO) in 2016, 38% of people globally exclusively breastfeed. In Indonesia, the success rate of exclusive breastfeeding remains low and is spread evenly [6].

The cause is thought to be multifactorial, including sociocultural factors, gynecology and obstetrics, psychosocial factors (lack of social relationships and feelings of dissatisfaction in marriage and life pressures during pregnancy, bad family relationships), and hormonal factors. There is a relationship between demographic factors, such as age, education level, marital status, and socioeconomic status, and the risk of mental disorders in postpartum mothers. Another study reported that 26% of the patients were young. This suggests that age may play a significant role in the development of mental disorders among postpartum mothers. Additionally, it is important to consider the impact of these factors on the overall well-being and mental health of both the mother and the child, as they can have long-term consequences if left unaddressed [7].

Compared to postpartum mothers without prenatal depression symptoms, postpartum mothers with untreated depression during pregnancy are seven times more likely to develop postpartum blues. Therefore, prenatal depression treatment is crucial for preventing postpartum depression. Compared to 92% of women with untreated depression, postpartum blues did not emerge in all depressed women who received psychotherapy or medication in a small observational study comprising 78 women diagnosed with depression in the first trimester of pregnancy. It highlights the importance of early intervention and proper treatment for prenatal depression to support the mental well-being of expecting mothers [8].

A mother's ability to show love and embrace her baby's arrival is shown in her attachment. This finding strengthens the link between mothers and children. Interactions such as touch, caresses, loving smiles, loving gazes, and a mother's affection for her child can all help create this inner relationship. Merging based on parental support for their children's upbringing and genuine love and acceptance occurs during this phase. During this phase, the mother's nurturing instincts played a crucial role in fostering a secure and loving bond with her baby. This emotional connection lays the foundation for children's overall development and sense of security in the world. As the mother consistently provides care and affection, the child learns to trust and rely on her, forming a deep and lasting attachment [9], [10].

The development of the baby and ease of breastfeeding are two reasons why the process of attachment establishment in primipara postpartum mothers requires the participation of several parties. This study aimed to examine the relationship between nursing success and binding attachment in postpartum primiparous women. The novelty of this study lies in its focus on primiparous postpartum mothers, while previous research has primarily focused on multiparous mothers. Additionally, this study utilized a comprehensive approach by considering various factors, such as maternal age, socioeconomic status, and previous breastfeeding experience, to provide a more holistic understanding of the relationship between bonding attachment and breastfeeding success.

## 2. METHOD

This study employed a cross-sectional research design with correlational methodology. This study included 144 primiparous nursing mothers with infants aged 0–3 months old. The sample consisted of 106 participants. The duration of breastfeeding, stress levels of mothers, and sleeping habits of infants were among the characteristics that the researchers focused on when gathering data via self-report questionnaires and interviews. The results of this study shed important light on the connection between the duration of breastfeeding and maternal stress in primiparous mothers of children between the ages of 0 and 3 months. Simple random sampling with probability sampling is applied.

The maternal role attainment scale form B (MARS-From-B) was used to assess attachment to children. Using basic random sampling, the researchers randomly chose a sample of individuals. The MARS-From-B instrument was used to assess children's attainment based on their mothers' reports [11], which was modified by researchers using bonding attachment theory [12]. The researchers modified the existing model by using bonding attachment theory to enhance its accuracy and performance. This theory focuses on how individuals form emotional bonds and attachments that can greatly influence their behavior and decision-making processes. By incorporating this theory into the model, researchers have aimed to capture a more comprehensive understanding of human interactions and dynamics.

Data analysis was performed using Spearman's correlation test. Research ethics was obtained from the Health Research Ethics Institute, Nahdlatul Ulama Institute of Health Sciences Tubans (certificate no. 53/LEPK IIKNU/IV/2023). The checklist sheet was designed to capture relevant information and ensure consistency in data collection. It includes the specific criteria and indicators used to assess the variables of

interest. Additionally, Spearman's correlation test was chosen, as it is a non-parametric statistical method that measures the strength and direction of the relationship between variables, allowing for a comprehensive analysis of the data collected. This method was deemed appropriate for this study because of the nature of the assessed variables, which may not follow a normal distribution. Furthermore, the checklist sheet was pilot tested with a sample of participants to ensure its clarity and effectiveness in capturing the desired information accurately.

### 3. RESULTS AND DISCUSSION

The results indicate that of the 106 respondents, 55 (51.9%) were mostly between the ages of 22 and 24, 49 (46.2%) were mostly parents of 2-month-old children, and 54 (50.9%) had completed high school. Seventy-nine respondents (74.5%) were female. A total of 55.19% of respondents reported having very good bonding attachments. Forty-nine (46.2%) participants successfully completed the nursing procedure. Furthermore, the research findings indicated that a noteworthy proportion of participants expressed challenges with time management, specifically in relation to balancing childcare responsibilities with domestic duties. Moreover, the results showed that most participants depended on assistance from their close relatives to raise their children. Additional information is presented in Table 1.

According to Table 2, there were a small number of respondents in the less successful category; as many as 12 (11.3%) had poor bonding attachments. In contrast, the successful category of breastfeeding among primiparous puerperal mothers included 31 (29.2%) with very good bonding attachments. These results imply that a sizable portion of primiparous puerperal mothers have good nursing outcomes and form close bonding relationships. However, a lower percentage of respondents mentioned having trouble bonding and nursing, which suggests that these situations call for further care and attention. It is noteworthy that numerous primiparous puerperal mothers exhibited both effective breastfeeding and strong bonding relationships, proving that the two are not mutually incompatible. However, the fact that only a small percentage of infants have trouble bonding and breastfeeding underscores the significance of providing focused support and intervention techniques to enhance outcomes in these situations.

The sig value was ascertained using statistical tests with a significance level of  $\alpha \leq 0.05$ , utilizing Spearman's rho. Calculations were performed using the SPSS software application version 26 for Windows. A statistically significant link between the variables under test was indicated by a computed p-value of 0.001. The results of Spearman's rho test indicated a strong connection between the variables. Moderate association was indicated by a positive correlation coefficient of 0.437. This result indicates a relationship between bonding and breastfeeding success in postpartum primiparas. These results suggest a significant association between bonding attachment and breastfeeding success among primiparous postpartum mothers. The moderate correlation coefficient of 0.437 further supports this relationship, indicating that as bonding attachment increases, breastfeeding success also increases. More details can be seen in the Table 2.

Table 1. Frequency distribution of respondents

No	Criteria	Frequency	Percentage (%)
1. Mother's age (Year)	19–21	35	33
	22–24	55	51.9
	25–27	16	15.1
	Total	106	100
2. Baby age (Month)	0–1	28	26.4
	2	49	46.2
	3	29	27.4
	Total	106	100
3. Education	Elementary school	8	7.5
	Junior high school	39	36.8
	Senior high school	54	50.9
	University	5	4.7
	Total	106	100
4. Job	Housewife	79	74.5
	Trader	10	9.4
	Private civil servants	5	4.7
	Private sector	12	11.3
	Total	106	100
5. Bounding attachment	Very good	55	51.9
	Good	37	34.9
	Poor	14	13.2
	Total	106	100
6. Breastfeeding success	Very good	49	46.2
	Good	45	42.5
	Poor	12	11.3
	Total	106	100

Table 2. The effect of bonding attachment and breastfeeding success in postpartum primipara mothers

Bounding attachment	Breastfeeding success			p-value
	Succeed	Moderate	Not succeed	
Very good	31	24	0	55
	29.2 %	22.6 %	0.0 %	51.9 %
Good	18	19	0	37
	17.0 %	17.9 %	0.0 %	34.9 %
Poor	0	2	12	14
	0.0 %	1.9 %	11.3 %	13.2 %
Total	49	45	12	106
	46.2 %	42.5 %	11.3 %	100.0 %

The mother and child's first skin contact or touch in the minutes to hours following the baby's birth is known as the "binding attachment." This initial physical connection between mother and child is crucial for fostering a strong emotional bond. It not only promotes feelings of security and trust but also stimulates the release of hormones that aid breastfeeding and overall maternal-infant bonding [13]. The term "attachment" describes the emotional connection that is formed between children and others who hold particular significance in their lives. There is ample evidence to support the practice of skin-to-skin contact after delivery, showing numerous advantages for both mother and child. The use of quick or early skin-to-skin contact to encourage breastfeeding has been supported by Wiffen reviews. Skin-to-skin contact immediately after birth promotes the release of oxytocin, a hormone that strengthens the bond between the mother and child. Early placental expulsion is beneficial for the mother [10], reduces bleeding [10], increases self-efficacy of breastfeeding [14], [15], and lowers stress levels. Increased maternal oxytocin levels within the first hour following delivery have been linked to the development of mother-infant relationships. Oxytocin, often called the "love hormone," is essential for attachment and social bonding. This hormone, which is released during breastfeeding and childbirth, encourages maternal behavior and sentiments of trust and attachment. Benefits for the baby include reduced negative consequences of 'birth stress', more optimal thermoregulation, continued thermoregulation even on the first day and less crying [16]–[18]. Skin-to-skin contact has been shown to increase breastfeeding initiation and exclusive breastfeeding while reducing formula supplementation in hospitals, leading to earlier successful breastfeeding [19], [20] and more optimal breastfeeding [3], [13], [21]. This theory states that the emotional well-being of parents and the presence of a social support network consisting of friends, parents, and spouses are prerequisites that impact the emotional ties between a mother and her child. A parent's degree of communication and caregiving proficiency, proximity of parents, compatibility between parents, and compatibility of parents and offspring in terms of circumstances, temperament, and gender. Additionally, the theory suggests that the quality of the parent-child relationship is influenced by factors such as the parent's ability to provide a nurturing and responsive environment, as well as the child's individual characteristics and needs. It also emphasizes the importance of consistent and positive interactions between parents and their children in fostering a strong emotional bond [22].

Knowledge is a factor that affects the binding adhesion. A mother's comprehension of the bonding attachments is essential. If she is well versed in the benefits of these attachments, she will lavish her child with affection. This affectionate behavior creates a strong emotional bond between the mother and the child, promoting a sense of security and trust. Additionally, a mother's understanding of the importance of bonding attachments can also influence her ability to effectively recognize and respond to her child's emotional needs. Similarly, better-educated mothers stand to gain from fresh knowledge that will enable them to provide their babies with superior care. Therefore, many knowledgeable mothers have good relationships with their children. Furthermore, understanding bonding attachments can assist in identifying and resolving any potential obstacles or problems that emerge throughout the attachment process. Because of this awareness, they are able to look for the right resources and assistance, which eventually improves the quality of their relationship with their children. Ultimately, information is essential for developing strong and lasting relationships between mothers and their children. By understanding bonding attachments, mothers can also gain insights into their children's emotional needs and preferences, allowing them to provide tailored support and nurture a deeper connection. This knowledge empowers them to navigate challenges with empathy and patience, fostering a secure and loving environment in which their children can thrive. Ultimately, the information obtained about bonding attachments enhances the overall well-being and happiness of both mothers and their kids [23]–[26].

The mother's age is another element that affects binding attachment. An individual's viewpoint on handling life challenges changes with age. Age determines a person's developmental process. They can experience a range of things in their lives, such as controlling their mental health. Primiparous women are more likely to experience stress after childbirth. This is possible because, following their first childbirth, women undergo a process of adjusting to a variety of changes, particularly psychological ones. The age of the mother can have an impact on this psychological adjustment because younger mothers might not have as

much life experience to draw from when it comes to emotional regulation and adjusting to the demands of parenthood. In addition, younger mothers may face challenges in terms of financial stability and social support, which can further contribute to their stress levels. It is important for healthcare professionals to provide adequate support and resources to help these women navigate the postpartum period and promote their overall mental well-being [27], [28].

Bounding attachment was also influenced by the mothers' educational attainment. A mother's lack of education causes her to be ignorant of the significance of bounding connections. Both formal and informal methods were used to acquire this information. Highly educated mothers, on the other hand, are typically more receptive to adjustments or measures taken to preserve their health. In addition to fostering curiosity and a desire for experience, education helps people turn information into knowledge. Furthermore, educated mothers are more likely to seek resources and information on attachment and bonding, allowing them to make informed decisions about nurturing their children's emotional development. Education also equips mothers with critical thinking skills, enabling them to understand the long-term benefits of fostering a strong attachment to their child [29], [30].

Typically, a mother's job is to soothe her crying infant and stay at home to care for her own child. In the initial hours following delivery, skin-to-skin contact or direct skin contact between the mother and child might deepen their emotional connection. In the early stages of breastfeeding, the mother feels at ease and content when she sees her baby sucking, allowing her body to release the hormone oxytocin, which functions as a let-down reflex. Additionally, a baby's social-emotional development may benefit from the mother's immediate auditory stimulation. This stimulation occurs when the mother talks or sings to her baby, strengthening their bonds and promoting language development. Furthermore, the baby's sense of security and trust in their mother can be enhanced through this early interaction, laying a foundation for healthy relationships in the future.

When a baby is breastfed, he or she not only enjoys the milk, but also the warmth and tenderness of the mother's caress. Oxytocin is released when a baby touches the mother's nipple, which can help breast milk production proceed smoothly. The amount and supply of milk increases with the frequency at which the baby suckles the mother's breast. Warmth, easing pain for the mother, comfort, role identity, and assisting mothers in breastfeeding immediately are all advantages of bonding attachment. Breastfeeding increases oxytocin and prolactin levels, which in turn stimulates uterine contractions, stops postpartum hemorrhage, and increases milk production. Additionally, breastfeeding provides numerous health benefits for both the mother and the baby. For babies, it helps strengthen their immune system, reduce the risk of certain infections and diseases, and promote healthy growth and development. However, breastfeeding can also help the mother recover faster from childbirth, reduce the risk of breast and ovarian cancers, and promote a stronger bond between her and her baby [31].

Bounding attachments that are done early also increase the attachment between the mother and baby, so it will encourage mothers to be competent and more confident in caring for and breastfeeding their babies. The results of a study conducted by Kim and Kim [32] concluded that nursing actions in facilitating bonding attachments increase the confidence of mothers in caring for their babies in the early postpartum period. Research conducted by El-Kashif and Elgazzar [31] proves the influence of the relationship between mother and baby very early, when mothers who are given more time to make contact with their babies will have a more intensive attachment to their babies in their next life. The mother's role tends to be to calm her baby when she cries, and prefers to stay at home to care for her child.

Therefore, when breastfeeding, in addition to the baby getting pleasure from the milk itself, the baby feels the warmth of affection obtained from the mother's service or touch. Oxytocin is released through the baby's touch of the mother's nipple, which can stimulate the smooth production of breast milk. The more often the baby suckles the mother's breast, the greater is the milk production and expenditure. This is because frequent breastfeeding signals to the mother's body require more milk, which leads to increased production. Additionally, the act of breastfeeding also helps the mother's uterus contract and return to its pre-pregnancy size, aiding in postpartum recovery.

#### 4. CONCLUSION

Most primiparous postpartum mothers have good attachment bonding. Giving breast milk to primiparous postpartum mothers is mostly successful during the breastfeeding process. A significant relationship was found between attachment bonds and breastfeeding success among primiparous postpartum mothers. This shows a positive correlation between bonding attachment and breastfeeding success in primiparous postpartum mothers. These findings suggest that stronger bonds contribute to a higher likelihood of successful breastfeeding in this population. Healthcare providers should prioritize increasing bonding attachment in primiparous postpartum mothers to increase their chances of successful breastfeeding. Additionally, further research could explore the specific factors that contribute to attachment engagement, and how they can be effectively promoted in this population. Future research should also consider the

involvement of more intensive social and educational support for primiparous postpartum mothers. This can help increase their understanding of the importance of attachment bonding and provide effective strategies for building bonds with their children.

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